BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Diploma in Engineering Pearson BTEC International Level 3 Diploma in Digital Engineering Pearson BTEC International Level 3 Diploma in Manufacturing Engineering Pearson BTEC International Level 3 Extended Diploma in Engineering Pearson BTEC International Level 3 Extended Diploma in Digital Engineering Pearson BTEC International Level 3 Extended Diploma in Manufacturing Engineering Pearson BTEC International Level 3 Extended Diploma in Mechanical Engineering
Unit number and title	**Unit 40: Computer Aided Manufacture and Planning**
Learning aim(s)	**C:** Investigate planning documentation used to optimise the workflow and initiate manufacture in the operation
Assignment title	Preparing for manufacture
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You have been employed as an apprentice engineer at a small engineering firm producing bespoke components using computer aided manufacturing. The company is impressed with your developing skills in computer aided design and manufacturing, and after the delivery of the simulated product to the customer they would like to produce a range of [bolts] using the design in a range of diameters for use in their production operation. They would like you to plan the manufacturing of [5 custom bolts with sizes 12, 24, 36, 44 and 50mm].

Task 1	Produce a manufacturing plan for the customer's specification and product range. Provide an overview of the products that need to be manufactured, including forecasts and demand from the customer, when and how the products will be manufactured and the resources required, volume, capacity and planning considerations Produce a schedule for the manufacturing of the products in the form of a project plan or a Gantt chart. Ensure the schedule covers resources required, customer requirements and availability of tooling. Produce engineering drawings, process descriptions, processes and parameter requirements, measurements, tolerances and surface texture diagrams for the manufacturing of the component. Produce a bill of materials and works orders to track the order through the company.

Checklist of evidence required	Document portfolio for planning and scheduling.
Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
40/C.D3	Optimise the manufacturing plan and schedule for a range of products and order quantities, creating an accurate manufacturing specification for a product that is suitable for a CAM system.
40/C.M3	Create an effective manufacturing plan and schedule for a range of products and order quantities, creating an accurate manufacturing specification for a product that is suitable for a CAM system.
40/C.P5	Create an effective manufacturing plan for a range of products considering a fixed order quantity.
40/C.P6	Create an effective manufacturing schedule for a range of products considering a fixed order quantity and a manufacturing specification for a product that is suitable for a CAM system.